PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applican O.Z.	t's or agent's file reference 6286-WO	FOR FURTHER A	ACTION	See Form PCT/IPEA/416				
Internation	onal application No.	International filing d	ate (day/month/year)	Priority date (day/month/year)				
PCT	/EP2004/0500	08.01.200)4	22.01.2003				
International Patent Classification (IPC) or national classification and IPC								
	C01B33/193, C08K3/36, C09C1/30, B60C1/00, B60C17/00							
Applicant DEGUSSA AG								
1.	1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.							
2.	This REPORT consists of	of a total of6	sheets, including	ng this cover sheet.				
3.	This report is also accom-	panied by ANNEXES, comprising	:					
	a. (sent to the a	pplicant and to the International B	ureau) a total of 6	sheets, as follows:				
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.							
		nternational Bureau only) a total of	Gindicate type and numb	er of electronic corrier(c))				
	o (sent to the fi	<i>иеткиются Битеий оту)</i> а total of	(marcate type and number	er of electronic carrier(s))				
	, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).							
4.	This report contains indi-	cations relating to the following ite	ms:					
	Box No. I	Basis of the report						
	Box No. II	Priority						
	Box No. III	Non-establishment of opinion with	h regard to novelty, inven	tive step and industrial applicability				
	Box No. IV	Lack of unity of invention						
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement							
	Box No. VI	Certain documents cited						
	Box No. VII Certain defects in the international application							
	Box No. VIII Certain observations on the international application							
Date of submission of the demand		Date of completion of the	nis report					
Name and mailing address of the IPEA/EP			Authorized officer					
Faccimile No.		T-1b N-						

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050004

Box	No. I	I Basis of the report					
1.		h regard to the language, this report is based on the internati cated under this item.	onal application in the language in	which it was filed, unless otherwise			
		This report is based on translations from the original languments which is the language of a translation furnished for the pure that the control of the pure translation furnished for the pure translation.					
		international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.	40				
		international preliminary examination (Rule 55.2 and					
2.	rece	With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report): the international application as originally filed/furnished					
	M	the description:					
		pages <u>1-33</u>		as originally filed/furnished			
		pages*	received by this Authority on				
		pages*	received by this Authority on				
	\boxtimes	the claims:					
		nos.		as originally filed/furnished			
		nos.*	as amended (togethe	r with any statement) under Article 19			
		nos.* _ 1-23	_ received by this Authority on	07.06.2005 with letter of 01.06.2005			
		nos.*	_ received by this Authority on				
		the drawings:					
		sheets		as originally filed/furnished			
		sheets*	received by this Authority on				
		sheets*	received by this Authority on				
		a sequence listing and/or any related table(s) – see Supplei					
3.	П	The amendments have resulted in the cancellation of:					
		the description, pages					
		the claims, nos.					
4	\Box	This report has been established as if (some of) the amer	adments annexed to this report and				
	Ш	they have been considered to go beyond the disclosure as					
		the description, pages					
		the claims, nos.					
		the drawings, sheets/figs					
		the sequence listing (specify):					
		any table(s) related to sequence listing (specify):					
*	If ite	em 4 applies, some or all of those sheets may be marked "su	perseded."				

International application No.				
PCT/EP2004/050004				

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement			
	Novelty (N)	Claims _ 1-23	YES	
		Claims	_ NO	
	Inventive step (IS)	Claims _ 1-23	YES	
		Claims	_ NO	
	Industrial applicability (IA)	Claims _ 1-23	YES	
		Claims	_ NO	
2.	Citations and explanations (Rule 7	0.7)		
	•	makes reference to the following		
	documents:			
	D1:	EP-A-0 983 966 (DEGUSSA-HUELS		
		AKTIENGESELLSCHAFT; DEGUSSA AG) 8 March		
		2000 (2000-03-08)		
	D2:	EP-A-0 901 986 (DEGUSSA-HUELS		
		AKTIENGESELLSCHAFT; DEGUSSA AG) 17 March		
		1999 (1999-03-17)		
	D3:	EP-A-0 755 899 (DEGUSSA-		
		AKTIENGESELLSCHAFT) 29 January 1997		
		(1997-01-29)		
	D4:	WO 96/35639 A (PPG INDUSTRIES, INC) 14		
		November 1996 (1996-11-14)		
	D5:	EP-A-0 745 558 (DEGUSSA		
		AKTIENGESELLSCHAFT; DEGUSSA-HUELS		
		AKTIENGESELLSCHAFT) 4 December 1996		
		(1996-12-04)		
	D6:	EP-A-0 407262 (RHONE-POULENC CHIMIE) 9		
		January 1991 (1991-01-09)		
	The second	- compliantion aloima marainitatad ailiri		
	-	application claims precipitated silicic		
		ned by specific paramter ranges (claims 1-		
	o). The Cla	aimed precipitated silicic acids can be		

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modified using organosilanes (claims 18 and 19). The methods for producing these precipitated silicic acids are claimed in claims 9-17 and 20.

The possibilities for their use are disclosed in claims 21 and 22.

Claim 23 claims a vulcanizable rubber mixture containing the non-surface-modified precipitated silicic acids.

D1 is regarded as the prior art closest to the subject matter of claim 1.

D1 discloses a precipitated silicic acid having the following physicochemical data:

- BET surface area: $80-180 \text{ m}^2/\text{g}$

- CTAB surface area: $80-139 \text{ m}^2/\text{g}$

- BET/CTAB ratio: 1.0-1.6

- Sears number: 5-25 ml

- DBP number: 200-300 ml/100g

D4 (page 16, line 28 to page 17, line 3) shows that precipitated silicic acids normally contain 1-7 percent by weight moisture. This is confirmed by D5 and D6 (see D5, page 8, lines 1-12; D6, examples 1-3).

Therefore, the moisture is regarded as being implicitly disclosed in D1.

The precipitated silicic acids can also be surface-

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

modified using organosilanes (D1, claims 11 and 12; page 6, line 2 to page 8, line 10).

The precipitated silicic acids can be mixed into vulcanizable rubber mixtures as a reinforcing filler.

D1 differs from the subject matter of present claim 1 in that it does not claim a ratio of Sears number to BET surface area.

In view of D1, present claim 1 appears to be a selection invention.

An invention is considered a selection invention when the following three requirements have been fulfilled:

- There is no technical effect.
- The examples in the prior art are sufficiently far removed from the embodiments of the present invention.
- A sufficiently narrow scope is claimed as compared to the scope described in the prior art.

The precipitated silicic acid according to claim 1 of the present application differs essentially from the examples in D1, since the feature "ratio of Sears number to BET surface area" is greater, which means that the precipitated silicic acids in D1 have fewer OH groups per square meter of surface area.

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The applicant has demonstrated surprising technical effects over the prior art. These technical effects are increased rubber activity, very good dispersion behavior and shorter vulcanization time.

These three requirements and therefore the criterion in PCT Article 33(2) and (3) appear to be satisfied by the present claim 1.

Consequently, the subject matter of claim 1 can be regarded as novel and inventive (PCT Article 33(2) and (3)).

Claims 2-8, 18 and 19 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step, as do the method claims 9-17 and 20 and the use claims 21-23.